

Review Article

We Are Now Standing On Not Normal Land: Nurses' Competency in Disaster Management

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Abstract: Currently, the incidence of disasters is the biggest catastrophes that threaten people's livelihoods, health, and others welfare around the world. This situation provides the challenges for health care professionals, particularly nurses. As a result, there is a global need for all healthcare workers to be prepared and be competent in disaster management. The purpose of this paper is to describe how the roles of nurses in disaster management and how much competencies is needed. By searching the related data sources of CINAL plus, Google scholar and research gate, this paper will discuss the nurses' roles and experiences in disaster management, the reason why nurses need competencies in disaster management and how should we do to achieve the competencies of nurses in disaster management. When a disaster strikes, nurses are the ones who receive the most challenging tasks among the health care team because they are the first responders to be called upon. For that reason, the nurses should have positive characteristics and competencies to be an appropriate role model in disaster care.

Keywords: competency, disaster, disaster management, nurse

INTRODUCTION

Nowadays, we are constantly faced with the challenges of the outbreak of infectious diseases, traffic accidents, war, terrorist attacks and many other disasters such as earthquake, landslide and flood around the world. Therefore, it is important to maximally mobilize all human resources and natural resources to cope with difficult situations effectively to minimize the damage and the suffering due to the disasters. A disaster is a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental loss and impacts, which exceeds the ability of the affected community or society to cope using its own resources. Traditionally, professional emergency response departments, medical relieving organizations and hospitals, are responsible for most of the disasters related response and management efforts in the most countries in all over the world.

All nurses have the potential to experience a disaster, whether by circumstance or inclination. Nurses may experience disaster directly when an event, such as

a tornado or hurricane, occurs in and disrupts their community and place of employment, in which case they may be considered both a survivor and responder. Nurses may also volunteer in domestic or international disaster and humanitarian events as part of disaster relief nongovernmental organizations (NGOs) or governmental response groups. The World Health Organization and International Council of Nurses (WHO/ICN)(2009) stated that "disaster education for all nurses is vital" (p. 5), and preparedness is expected of all nurses [1]. Nurses are frequently the first healthcare workers on site.

In this paper, it is intended to highlight the important role of nurses and reasons of why nurses need the competencies in disaster management with second thoughts of related literatures.

METHODS

The literature searched included CINAL plus, Google scholar and research gate databases and focus on search terms like nurses' roles and experiences, disaster, disaster management, competency. The initial

search resulted 98 articles. A total of 25 articles and one thesis that meet the criteria to this study.

DISCUSSION

What are the roles and experiences of nurses in Disaster Management?

Nurses have a responsibility to assist people using their knowledge and skills either caring for healthy or sick person in all situations: normal, emergency, and disaster. In addition, they should also enhance their profession's capability to ensure adequate healthcare services before and after a disaster by their contribution in all disaster phases [2]. Disaster phases include preparedness phase, response phase and recovery phase. In the preparedness phase, nurses must identify disaster risks and populations, particularly vulnerable groups; cooperate with other agencies in developing plans to decrease the morbidity and mortality rates, which is being able to advocate and help in developing public policies to reduce the potential effects of disaster [3]. In response phase, the nurses have to continue helping the victims in the emergency situation, consist of rapid needs' assessment; first-aids and medical assistant in emergency situation, prevention of injury and promotion of sanitation, establishment or restoration of modes communication and transportation, surveillance of infectious disease, mental and psychosocial problem of individuals, families, and communities, risk assessment by inspecting shelter sites and previous cases, and evacuation of community members from affected areas [3]. The recovery phase aims to return the condition of public health system and community back to normal, as well as increases the strength of staff and community for future disaster management. In this phase, roles and responsibilities of nurses, which includes providing a continuum cares and helps for the victims, are major concerns at the period right after a disaster occurred [3]. Moreover, they should participate in the evaluation of disaster response and subsequent redrafting of the response plans with other healthcare providers for future disaster management. Hence, there is needed the supports from qualified staff nurses in term of their capability to provide care and perform disaster management activities in each phase of disaster management to achieve quality disaster management.

Regarding nurses' experiences in disaster management, they explored their experiences in their anecdotal notes, they said they supervised and discomfort at the reduced medical resources, difficult living and arduous work environments, unfamiliar cultural and/or social conditions, unfamiliar professional roles, especially in heavy patient workload,

and unexpected patient care. Some systematic research of nurses' experience of disaster revealed that nurses were fearful of their surroundings inside and outside the hospital, of criminals, animals, darkness, and their own death, nurses experienced ethical conflicts when faced with only bad choices, job boundaries became blurred, as physicians performed non-physician work, lay persons were trained to assist the nurses, and nurses did whatever needed to be done and also they felt that they are isolated from the rest of the world. Moreover, nurses described that a sense of powerlessness because they were only able to provide "primitive, basic, or archaic" nursing care, and nurses alternately lost all hope for survival or regained hope from colleagues, radiobroadcasts, or relying on their faith. Jordan-Welch, (2007), a phenomenological study, agreed that there is nothing had been prepared by them for this experience and also suggested that the need to understand the disaster environment of nurses. Nurses became patients themselves, some dehydrated or psychotic from the distress and fear caused by the conditions inside their hospitals [4].

Why competencies are needed for nurses in disaster management?

As the disasters occurring more frequently and threatening people's lives around the world, the need to prepare nurses for disaster has never been greater. Nurses should be equipped with the essential knowledge and abilities in a disaster management and to meet the needs of the respective serving community. However, more than 80% of nurses who volunteered to serve for a disaster event had no previous experience in disaster response⁵. It was recommended by the World Health Organization & International Council of Nurses (2009) that all nations, no matter how frequent (or infrequent) the disasters, should prepare healthcare workers for a disaster [1]. Nevertheless, most nurses were inadequately prepared for the disaster. Nurses need to be competent in order to deal with disastrous situations.

In Loke and Fung (2014)'s study mentioned that Hong Kong nurses have some understanding of the needed competencies in "prevention, preparation, response, and recovery" phases of disaster care. None of the nurses in this study mentioned that their own preparation and that of their families for disaster. Nurses, as well as all other health professionals, should be aware of the importance of being prepared individually and in their families, so that they can be ready to provide care during disaster, and to protect life [5]. When a disaster occurs suddenly, having solid disaster nursing knowledge and skill competencies will

save more lives. According to Deng *et al.*; in 2010 nurses should know cardiopulmonary resuscitation (CPR), wound haemostasis techniques, site immobilization and splinting of fractures, methods for removing a foreign body in the airway, treatment measures for unexplained syncope, rapid assessment of trauma sites, classification of trauma triage, the use of an automatic external defibrillator, evacuation of fire and earthquake sites, and other skills of disaster rescue skills and strategies [6]. According to Li *et al.*; in 2012 disaster rescue knowledge of nursing personnel should include four dimensions such as first aid, transport, hospital emergency care, and sanitation and epidemic prevention [7].

The important role of nurses in disaster extends beyond the disaster itself and the post-disaster period to include pre-disaster prevention and preparation measures. Pre-disaster preparedness involves assessing the health needs of the affected individuals in the early and middle periods, which has a certain effect on the sustainable development of the economy. Competency skills in handling emergencies are very important to improve the success rate, accuracy, and quality of emergency treatment because of the unexpected nature of all types of emergencies can occur in disaster. Early first aid for the wounded is very important at the disaster scene [8]. The nurse should maintain emergency awareness and alertness of the overall situation and observe the environment for subtle changes in conditions. At the episode of a disaster, nurses need to quickly react and assess the scene, promptly take the appropriate treatment measures, and treat the wounded. The nurse should focus on adequate preparation, on-site first aid, transit safety and treatment coordination, attend to special populations, and offer effective psychological intervention and other aspects of the emergency protocol [9]. The management and coordination of nursing resources are an indispensable part of disaster nursing. The nurse should be flexible in the selection of the existing effective resources for temporary treatment and application [10].

The destruction of homes and separation of individuals from their relatives and friends that may cause individuals to experience a lack of security and belongingness and also often creates extreme panic and anxiety. If we do not intervene in time, it will lead to emotional, cognitive, behavioural and other issues related to the mental health of individuals; ultimately, individuals may experience post-traumatic stress disorder [11]. The nurse should give psychological counselling and humanitarian care to affected individuals in a timely manner and encourage them to

be positive about overcoming the situation and rebuilding their homes. In addition, it is believed that when disaster strikes, the needs of the nurses are often greater than other types of health professionals [12]. Excessive pressure and a heavy mental workload can cause psychological problems for the nurse. Therefore, nurses need to learn how to control and adjust their psychological state. Therefore, psychological stress management is an important resource for professional nurses in disaster management [13].

How do we achieve the competencies of nurses in disaster management?

Even though a few attempts have been made to standardize the competencies, there are no recent extensive approved and unified requirements for all types of disaster medical training and education designed for medical personnel [14]. On the other hand, Gebbie&Qureshi (2002) asserted that the disaster and emergency preparedness competencies particularly for the nurses who work in the United States had not been formed. This appears to suggest that there should be a specific framework of competencies for disaster nursing for each country or for each type of disaster [15]. Schramm and Hansen (1991) also proposed that specific strategies to respond are required for each type of disaster [16].

The need for training and education on disaster competencies has become a priority since the frequency of disasters occurring is increasing worldwide [5]. Even though the fundamental task has been done to determine competencies for the health care professionals engaged in emergency and disaster, further development should be done to specify the knowledge, skills and attitudes required for the health care personnel [14]. Nursing schools should lead the efforts of delivering help and care during disasters and planning the future health care team to be able to efficiently respond to every type of disaster [17]. Moreover, an appropriately efficient emergency preparedness is required with the actual training and education of facility and emergency staff [18]. The education of competencies in disaster nursing also promotes the better emergency and disaster preparedness [1, 5].

Because every nurse has the potential to experience a disaster in a community, and as the International Council of Nurses expects all nurses to be disaster nurses, it follows that disaster training should be provided at the place where one can reach all nurses. Therefore, disaster education should be provided as part of the initial RN education program. The framework developed by the International Council of Nurses (ICN)

for disaster nursing competencies, perhaps is the most comprehensive framework to be applied in disaster nursing [17]. Besides, the World Health Organization and International Council of Nurses (2009) analysed an organizing system to assure that all aspects of disaster nursing were taken into account in the competencies and they are formed to cater the worldwide standardized model. These competencies are important as the foundation to plan a curriculum, particularly emphasized on disaster nursing [17].

Therefore, the appropriate standardized framework for disaster nursing core competencies should be utilized in the nursing practice worldwide and the ICN framework appears to be the most practical so far. Disaster nursing competency training, as well as the instruction pertaining to disaster terminology, the way to use the proper protective equipment, and the efficient collaboration and communication with emergency care staffs being demonstrated, will lead to the improvement of patient progress and promote better results during an actual disaster or mass casualty incident.

Disaster education for nurses should emphasize the contextual circumstances that are, disaster response occurs in the setting of the disaster. Disaster nursing does not simply 'transplant' the usual clinical practices into a disaster setting, and living conditions and working conditions will likely be far different than the nurses' regular employment setting. Disaster training must prepare nurses for the anticipated conditions. It has to reflect damaged surroundings and reduced resources, with vastly increasing needs. Training must occur in a 'not normal' environment with simulation the cumulative effects of fatigue, sleeplessness, the compounded failure of systems, total chaos, running out of supplies, public health aspects of the surge, and shelter. Another issue of training is that of physical fitness. Disaster work is physically and emotionally demanding. Disasters frequently occur in hot and humid regions, and these may likely be the nurses' working conditions. The sudden manual nature of many tasks compounds the physical demands of extended work shifts. Personal physical training and wellness prior to a disaster will help the nurses sustain their capability of giving care under extremely difficult situations.

Nurses should acquire the competencies to be able to deliver care effectively in various events in their workplace and during the mass casualty incidents or disasters. The competencies may be improved with the frequency of exposure and experience as they are working [18]. Additionally, the nurses should also be

given support, specifically mental and psychological support, when a disaster strikes because their demanding tasks may lead them to feel overwhelmed and stressful [19]. So, nurses should be provided with psychological support and be equipped with appropriate competencies in order to deliver effective care when a disaster takes place.

CONCLUSION

As a conclusion, disaster nursing is a new comprehensive cross-discipline integrating medicine, nursing, sociology, psychology and other disciplines. To improve the ability of nurses in disaster management, it is necessary to define the concept and elements of disaster nursing competency and develop a strong theoretical framework for disaster nursing in nursing education. It is also necessary to construct the disaster nursing ability standard and evaluation system suitable for the country. Long-term challenges will help build the framework for disaster nursing competency to further confirm the abilities of disaster nurses.

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